Re: FCC Proceeding 99-25: Creation of a Low Power Radio Service

I am writing these comments as a listener of radio stations on the FM band. I quite frequently listen to stations well beyond their 1 mV/m predicted contour. The situation of listeners like myself were not discussed in FCC NPRM 99-006. The airwaves belong to all of us. Just because some of us may live outside the 1 mV/m contour of a station doesn=t mean we can=t derive great listening pleasure from that station. A radio station does not need to be local to be valuable to a listener.

I live about 120 km (75 miles) from the transmitting antennas of most of the FM stations in Chicago. Because of the height above average terrain of these antennas, I can receive these signals 24 hours per day, 7 days per week. I use a rooftop receiving antenna about 9 meters (30 feet) above the ground: same height as the F50/50 tables. I do not live in an area of unusually high terrain, so these signals are available over a considerable area. The signal-to-noise ratio of the demodulated audio of the Chicago stations is about 50 dB in stereo: roughly equivalent to that obtained from cassette tapes.

I listen to the FM stations from Chicago because of programming quality that can be obtained from a major market. Our family visits Chicago frequently so listening to Chicago stations keeps us up to date with what=s happening. To our family being able to listen to Chicago stations is a great resource.

Locally we are served by four noncommercial FM stations, seven commercial FM stations, and three translators. Virtually every FM channel has a signal on it.

I am opposed to both the low power FM and microradio proposals because it is extremely likely that the quality of the programming provided by the low power radio service would be far short of the caliber of the programming that it would displace due to interference. With the previously mentioned 14 FM stations (and 3 AM stations) in this market, I really don=t think we need to add more in spite of all the supposed virtues touted for LPFM and microradio. If LPTV is an example, low power radio channels will get gobbled up in Rockford, and surrounding towns that could really use the service will get nothing.

From the interference standpoint I oppose the LPFM and microradio proposal because it is quite likely that I would no longer receive some of the Chicago FM stations due to co-channel or first-adjacent channel interference. I have experienced both types of interference from Class A and translator stations interfering with higher class stations. The results are not pretty, to which I can attest from having to listen to annoying first-adjacent interference from a translator while my son listens to his favorite station when I drive him to school. Trading the reception of a Chicago FM station for a local LPFM or microradio station could be like trading Boardwalk for Mediterranean on a Monopoly board - maybe worse.

By way of comparison, the advent of low power TV caused significant interference problems in the Rockford area. Of the five LPTV stations in the area four caused interference. Three wiped out reception of Chicago TV stations for some viewers. In two cases the interference was first-adjacent, and in one case was co-channel. The fourth case caused artifacts in the video for some viewers. The station that did not cause interference just happened to be in a fortunate location, or we could have been batting five-for-five. The most exacerbating featuring of all this interference was that the transmitting antennas were located in or near residential areas. Because LPTVs have greater flexibility in finding transmitting sites and the need to be closer to the audience, the LPTV stations delivered their interference at point-blank range.

The Commission is to be commended for paragraph 74.703(b) in CFR 47 that protects the rights of viewers from LPTV interference. However, I found in practice that it was difficult to even muster a letter of complaint from viewers on their own behalf. They may have felt that it was futile to deal with broadcasters and the FCC or they were afraid of a protracted struggle. In spite of these difficulties, if LPFM and/or microradio are implemented, provisions similar to 74.703(b) would seem appropriate for LP100 and microradio stations. Anything that could be done to head off potential interference problems in advance,

such as an individual functioning as a local frequency planner, could be helpful.

Also significant for some TV viewers in our area was the loss of reception of TV channel 9 from apparently legal second harmonic radiation from a 4 kw ERP FM station. In view of this, the Commission may want to consider the potential of second harmonic LPFM transmissions affecting analog TV reception or eventual digital LPFM transmissions affecting DTV.

Another area of consideration for Low Power Radio Service is whether the mileage separations are going to be adequate. The proposed separations are based on the traditional mileage scheme to make allocations easier to determine. The scheme worked well when Class A=s were only on channels with other Class A=s, and Class B=s were only on channels with other Class B=s, etc. However, atmospheric ducting is a frequent anomaly during about six months of the year in our area. I have seen FM signal strengths increase by 20 to 25 dB during ducting. (A 20 dB increase makes a 1000 watt station look like 100,000 watts.) The sizable co-channel mileage separations between Class B and between Class C stations were large enough to handle this phenomenon. However, placing LPFM and microradio stations at much closer distances to the Class B and Class C stations could have some very unfortunate consequences. Using LPTV as an example, during ducting I have frequently observed severe co-channel interference between a full-power TV station 135 km (85 miles) away and an LPTV only 8 km (5 miles) away. Also during ducting, I have observed an LPTV station from Chicago, 120 km (75 miles) away put ripples into the video of a local full-power TV station well within its grade B contour.

I question whether the Commission will be able to effectively enforce adherence to the rules by LPFM and microradio stations. In our own area there has been a Class A operation that has a habit of grossly overmodulating and for a number of days was generating a spur that landed on the first-adjacent channel of another local Class A. Also in our area an FM translator increased its signal strength dramatically. I called the Audio Services Division to get details of the change; there was no change on file. That same translator for many months ran the audio of someone else=s translator, which started operating on the receiving frequency of the first translator. I question whether anyone was Aminding the shop@ at the first translator. In another incident, a local LPTV station for months ran a non-decodable NTSC signal. It was not an intentionally scrambled signal. However, the signal was very effective at jamming a distant signal that normally occupies the channel. Why did this station continue to broadcast? I realize that it is difficult for the Commission to police the whole country. But in view of this difficulty does it make sense for the Commission to enter into Low Power Radio Service? Is the Commission going to request more funding for enforcement?

As I read some of the programming ideas for the Low Power Radio Service, I could not help but think that the Internet does this and does it better. The term narrowcasting seemed more appropriate than broadcasting. Minorities need to throw a wide net to get the numbers to be efficient in discussing ideas, educating, and obtaining programming. Low power radio is a drop in the bucket. There just aren=t enough channels in the FM band to add any kind of meaningful diversity.

I also fear that some of the low power radio stations may resort to deception to secure financial support. Business people sometimes buy Asafety message spots@ from third party telephone solicitors who do the billing and send the copy to a radio station for airing. Currently there is a reasonable chance that the buyer=s expensive commercial is going to run an a station that can cover more than few kilometers. I=m afraid microradio would add new meaning to the words Acaveat emptor.@ Are buyer=s going to be savvy enough to know a full-power from a micro-power? I have also seen a full-power TV station ask for contributions to support it=s other station in another city. I=m sure most of the viewers would have no chance of knowing that the station in the other city was an LPTV with few if any viewers rather than another full-power station. This is not illegal; it=s just not the whole story. But I wonder if the Low Power Radio Service is enacted, whether it is going to open up a can of worms to go down in the annals of advertising. Noncommercial operation is not exempt as the distinction between sponsorship announcements and commercials narrows.

I question the timing of the Commission in entertaining the idea of Low Power Radio Service with digital radio development in the wings. The ducting phenomenon I mentioned earlier could have a much larger impact on digital co-channel interference than for frequency modulation, which benefits from the capture effect. With the higher fidelity achievable with digital radio, interference due to atmospheric conditions may become more objectionable than it is now for analog radio. With digital radio the reception will probably be either Ayou have it or you don=t.≅ That theoretically would push the coverage out to the edges of line-of-sight reception. It would be a shame to lose that because a few years earlier a number of LPFM stations wound up in or near the line-of-sight area. Also after 2006 the spectrum below 88 MHz, television channel 6, would open up. This would create a number of possibilities.

In summary, I turn to a comparison with low power television. There have been a few success stories for that service, but judging by the five LPTV stations in our market, it=s not only been a fizzle, but it=s destroyed some full-power reception in the process. I=d hate to see the same fate befall the FM band.

Sincerely,

Ronald J. Brey
Rockford, IL
hifibrey@aol.com